

Amendment
Serial No. 09/939,332
Page 2

States patent 5,422,139, issued Jun. 6, 1995), and Collins et al. (United States patent 6,077,384, issued Jun. 20, 2000).

B. The Examiner rejected claims 7, 10-13, 16-19, 21-23, 25, and 26 as being unpatentable over Bang et al. (United States patent 6,110,556, issued Aug. 29, 2000) in view of Okamoto et al. (Japanese Patent Publication 2000-252218), Fischer (United States patent 5,422,139, issued Jun. 6, 1995), and Collins et al. (United States patent 6,077,384, issued Jun. 20, 2000) and further in view of Wicker et al. (United States patent 6,129,808, issued Oct. 10, 2000), and Wu (United States patent 5,910,221, issued Jun. 8, 1999).

These rejections are respectfully traversed.

The Applicants note that under Subtitle H of the Inventor Protection Act of 1999, for patent applications filed after November 29, 1999, 35 U.S.C. § 103(a) is amended such that subject matter which would qualify as prior art under 35 U.S.C. § 103 via 35 U.S.C. § 102(e) is now disqualified as prior art, if the subject matter of the claimed invention and the prior art are commonly owned. Under these provisions, Bang et al. is excluded prior art under 35 U.S.C. § 103 with respect to the claimed invention, since Bang et al. is assigned to Applied Materials, Inc., of Santa Clara, California, as is the subject application.

In addition, Applicants enclose a declaration under 37 C.F.R. § 1.131 that has been executed by co-inventors, Eric Askarinam, Jeremiah T. Pender and Gerardo A. Delgadino, that declares a conception date for the invention claimed in the above-identified patent application to be before the August 29, 2000 issue date of Bang et al. and that due diligence was exercised toward reducing the invention to practice. In view of this declaration, Bang et al. is not prior art to Applicants' invention.

As stated in MPEP 715.04, a declaration filed under rule 37 CFR 1.131 requires the signature of each of the joint inventors unless it is shown that an inventor or inventors were "otherwise unavailable". In that instance the signatures of the remaining inventors is sufficient. Inventors Robert Wu, Hoiman Hung, Ananda Kumar, Olga Regelman and Douglas Buchberger were unavailable to

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execute a declaration. Mr. Hung and Mr. Kumar are no longer employed at Applied Materials, Santa Clara, California. Mr. Wu, Ms. Regelman and Mr. Buchberger did not respond to requests to provide an executed declaration before the due date for this response.

Therefore, the Applicants submit that the basis for the Examiner's rejection of claims 1, 6, 8, and 9 relying on Bang et al. as well as the rejection of claims 7, 10-13, 16-19, 21-23, 25, and 26 relying on Bang et al. has been removed with the filing of the declaration under 37 C.F.R. § 1.131. As such, the Applicants respectfully request that the rejection of claims 1, 6, 8, and 9 and claims 7, 10-13, 16-19, 21-23, 25, and 26 pursuant to 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

Thus, the Applicants submit that none of the claims presently in the application are obvious under the provisions of 35 U.S.C. § 103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Raymond R Moser Jr., Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

2/24/03

Patricia A. Verlangieri
Patricia A. Verlangieri, Attorney
Reg. No. 42,201
(732) 530-9404

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Serial No. 09/939,332
Page 4

Moser, Patterson & Sheridan, LLP
Attorneys at Law
595 Shrewsbury Avenue
Suite 100
Shrewsbury, NJ 07702

Please continue to direct all correspondence to:

Patent Counsel
Applied Materials, Inc.
3050 Bowers Avenue
P. O. Box 450A
Santa Clara, CA 95052

CERTIFICATE OF FACSIMILE TRANSMISSION under 37 C. F. R. §1.6

I hereby certify that this correspondence is being transmitted by facsimile under 37 C.F.R. §1.6 on February 24, 2003 and is addressed to the Commissioner for Patents, Washington, D. C. 20231, Facsimile Number: (703) 872-9310.

Allyson M. DeVesty
Type or print name of the person signing certification

Allyson M. DeVesty
Signature

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FEB 25 2003
GROUP 1700

INVENTION ALERT FORM

TO: Gaile Bailey M/S 2061
Extension: 32724

ALERT NO: ~~0005102~~

Date:

CIRCLE ONLY ONE FROM TOP ROW (REQUIRED FIELD):

STACK-1498

Please use separate attachments for any answers that don't fit on the form, especially for questions 3-8. If the answer to a question is "NONE", please write "NONE" rather than leaving the answer blank.

1. Title of Invention (please print clearly): Silicon carbide Doy with integrated gas inlet connection for article with chambers

2. Inventors Names only (please print clearly and provide complete information at Section 9.) James Pender, Raymond Henn, Eric Stevenson, Robert W. M. McLean, John Peglman

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3. Earliest dates and model names of all Applied products incorporating the invention which have been offered for sale or are expected to be offered for sale:

alpha Version to customer

4. If the invention has been demonstrated or described to persons other than Applied employees, for each disclosure please provide the earliest date, name of company, a brief description of what was disclosed and the purpose of the disclosure. Attach a copy of any related non-disclosure agreements:
Disclosures have been made to the following representatives of
Suppliers under next 36 months or disclosure or prevailing NDAs.
 Tim Drinan - PERCORY Jack Imai - NEC -
 5. If future disclosures like those in Question #4 are expected to occur within the next 12 months, Troy Celler
please provide the anticipated date, type of information to be disclosed, and purpose of the disclosure: NONE []

6. Describe any other known designs or processes, whether actually implemented or merely proposed in a publication, which could be considered similar to your invention or which constitute the state-of-the-art improved upon by your invention: If described in a publication, attach a copy of same or provide a citation.

suspended GDP, or shower heads in
CVD app chambers of AMAT.

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7. List each feature of the invention which you consider novel and non-obvious. Describe the advantages of each novel feature in comparison with the state-of-the-art approaches which are most similar to your invention:

The structure of the GDP - rig. ~~can be added gas~~
distribution plates or CVD-formed channels integral
with the SiC roof.

8. Describe the invention, preferably with reference to attached drawings:

This invention describes the ^{general} structure and methods for fabricating a chamber ~~without~~ ^{incorporating} gas feed channels in chambers. Silicon carbide of high bulk electrical resistivity is the material of choice ~~for~~ for roof because of its chemical resistance to F plasma, its high purity and

ATTACH ADDITIONAL SHEETS TO DESCRIBE INVENTION AS NEEDED

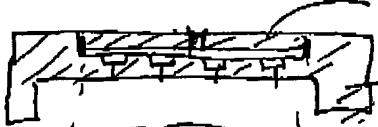
- good RF coupling characteristics.

The advantages of incorporating the gas distribution channels within the roof structure (not over a suspended gas distribution plate) are the following: ① More robust construction ② There is no RF shadow cast by the free hanging GDP ③ The ability to create complex gas distribution patterns. ④ Less likelihood of particulate contamination ⑤ Lower cost.

Prior art ① Gas was let in through holes in the aluminum pedestal and vi process kit plate situated around the ceramic electrostatic chuck.

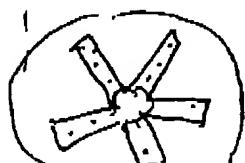
This invention: Two (2) embodiments of present invention

①



Silicon carbide plate with desired gas distribution
channels
Silicon carbide roof

① Bonded
construction



②



Channels formed in a
CVD SiC carbide layer by etching

INVENTION ALERT FORM

9. Provide the following information for EACH inventor:

Inventor #1: Legal Name:	<u>ESIC ASKA<inam)</u>	Employee # <u>10311</u> Mail Stop <u>81510</u>
Work Phone	<u>408-584-2402</u>	Fax No.: <u>408-584-2884</u>
Job Title:	<u>Mechanical Engineering Manager</u>	
Citizenship:	<u>U.S.A</u>	
Home Address:	<u>1332 Pavline Dr., Sunnyvale, Ca. 94087</u>	
Manager:	<u>EVANS Lee</u>	Title: _____
Div. Manager	_____	Title: _____
Product Group:	_____	Dept #: _____

Inventor #2: Legal Name:	<u>Robert Wu</u>	Employee # _____ Mail Stop _____
Work Phone	_____	Fax No.: _____
Job Title:	<u>sr. Member g Technical Staff</u>	
Citizenship:	_____	
Home Address:	_____	
Manager:	_____	Title: _____
Div. Manager	_____	Title: _____
Product Group:	_____	Dept #: _____

Inventor #3: Legal Name:	<u>Ananda H. Kumar</u>	Employee # <u>G5017</u> Mail Stop <u>81303</u>
Work Phone	<u>408-584-0173</u>	Fax No.: <u>4-0271</u>
Job Title:	<u>sr. Member g Technical Staff</u>	
Citizenship:	<u>INDIA</u>	
Home Address:	<u>1999 Blackfoot Dr., Fremont, CA 94539</u>	
Manager	<u>Arnold Khododenko</u>	Title: <u>Director</u>
Div. Manager	<u>Diana Ma</u>	Title: <u>GM</u>
Product Group:	<u>Oxide Etch</u>	Dept #: <u>1245</u>

INVENTOR ALERT FORM

FOR ADDITIONAL INVENTORS, PLEASE COMPLETE AND ATTACH ADDITIONAL SHEET AS NEEDED.

ADDITIONAL INVENTORS:

Inventor # :	<u>JERRY PENDER</u>	Employee #	Mail Stop
Legal Name:	<u>408-584-2467</u>		
Work Phone	Fax No. _____		
Job Title:	US		
Citizenship	<u>1565 Fuchsia Dr. San Jose CA 95125</u>		
Home Address	Title: _____		
Manager:	Title: _____		
Div. Manager	Dept #: _____		
Product Group:			

Inventor # :	<u>RAYMOND HUNG</u>	Employee #	Mail Stop
Legal Name:	Fax No. _____		
Work Phone			
Job Title:			
Citizenship:			
Home Address	Title: _____		
Manager:	Title: _____		
Div. Manager	Dept #: _____		
Product Group:			

Inventor	<u>Gerardo Delgadillo</u>	Employee #	Mail Stop
Legal Name:	Fax No. _____		
Work Phone			
Job Title:			
Citizenship:			
Home Address:	Title: _____		
Manager	Title: _____		
Div. Manager	Dept #: _____		
Product Group:			

INVENTION ALERT FORM

10. Signature, date and PRINTED name of each inventor plus two witnesses who have read and understood this Invention Alert form:

Inventors:

Eric Askamiany

Printed Name

Date

Signature

Robert Wu

Printed Name

Date

Signature

Ananda H. Kumar

Printed Name

Date

Signature

Jerry Pender

Printed Name

Date

Signature

Printed Name

Date

Signature

Printed Name

Date

Signature

Witness:

MARK O'Boyle

Printed Name

Date

Signature

Parasharav

Printed Name

Date

Signature

Return to:**Gaile Bailey****Mail Stop:****2061****Fax No.:::****986-3090****Extension:****563-2724**

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Applicant: Askarinam, et. al.

Case: 5102

Serial No.: 09/939,332

Filed: August 24, 2001

Examiner: Anna M. Crowell

Group Art Unit: 1763

Title: TOP GAS FEED LID FOR SEMICONDUCTOR PROCESSING
CHAMBER

COMMISSIONER OF PATENTS
Washington, DC 20231

SIR:

DECLARATION UNDER 36 C.F.R. § 1.131

I, Eric Askarinam, hereby declare as follows:

1. I am a co-inventor of the above-captioned patent application.
2. My co-inventors and I conceived of the complete invention as claimed in the above-identified patent application on or before August 29, 2000. Additionally, due diligence toward reducing the invention to practice was exercised from the conception date of the complete invention as well as the various portions thereof to subsequent reduction to practice of the invention.
3. To establish the conception date of the invention disclosed in the above-identified application that predates U. S. Patent 6,110,556 to Bang et al. issued August 29, 2000 (hereinafter referred to as the '556 patent). The following attached document is submitted as evidence of prior invention by Applicants: an invention disclosure form for the above-identified invention that was prepared by the inventors prior to the issue date of the '556 patent. Thus, the Applicants' conception date precedes the issue dates of the '556 patent.

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Declaration
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Page 2

subsequent constructive reduction to practice of the invention occurred on
August 24, 2001 with the filing of the above-identified application.

The undersigned, Eric F. E. Askarinam, hereby declares that all statements made herein is of my own knowledge are true and that these statements made on information and belief are believed to be true and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent resulting therefrom.

2-24-03

Date

Eric Askarinam
ERIC ASKARINAM

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Applicant: Askarinam, et. al.

Case: 5102

Serial No.: 09/939,332

Filed: August 24, 2001

Examiner: Anna M. Crowell

Group Art Unit: 1763

Title: **TOP GAS FEED LID FOR SEMICONDUCTOR PROCESSING CHAMBER**

COMMISSIONER OF PATENTS
Washington, DC 20231

SIR:

DECLARATION UNDER 35 C.F.R. § 1.131

I, Jeremiah T. Pender, hereby declare as follows:

1. I am a co-inventor of the above-captioned patent application.
2. My co-inventors and I conceived of the complete invention as claimed in the above-identified patent application on or before August 29, 2000. Additionally, due diligence toward reducing the invention to practice was exercised from the conception date of the complete invention as well as the various portions thereof to subsequent reduction to practice of the invention.
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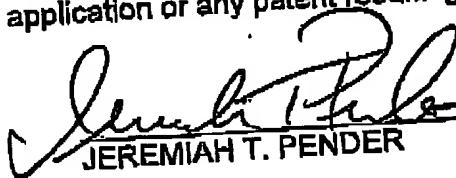
Declaration
Serial No. 09/939,332
Page 2

subsequent constructive reduction to practice of the invention occurred on
August 24, 2001 with the filing of the above-identified application.

The undersigned, Jeremiah T. Pender, hereby declares that all statements made herein is of my own knowledge are true and that these statements made on information and belief are believed to be true and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent resulting therefrom.

2/11/03

Date


JEREMIAH T. PENDER

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE
PATENT APPLICATION

Applicant: Askarinam, et. al.

Case: 5102

Serial No.: 09/939,332

Filed: August 24, 2001

Examiner: Anna M. Crowell

Group Art Unit: 1763

Title: **TOP GAS FEED LID FOR SEMICONDUCTOR PROCESSING
CHAMBER**

COMMISSIONER OF PATENTS
Washington, DC 20231

SIR:

DECLARATION UNDER 35 C.F.R. § 1.131

I, Gerardo A. Delgadino, hereby declare as follows:

1. I am a co-inventor of the above-captioned patent application.
2. My co-inventors and I conceived of the complete invention as claimed in the above-identified patent application on or before August 29, 2000. Additionally, due diligence toward reducing the invention to practice was exercised from the conception date of the complete invention as well as the various portions thereof to subsequent reduction to practice of the invention.
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Page 2

subsequent constructive reduction to practice of the invention occurred on
August 24, 2001 with the filing of the above-identified application.

The undersigned, Gerardo A. Delgadino, hereby declares that all
statements made herein is of my own knowledge are true and that these
statements made on information and belief are believed to be true and further
that these statements were made with knowledge that willful false statements
and the like so made are punishable by fine or imprisonment, or both, under
Section 1001 of Title 18 of the United States Code and that such willful false
statements may jeopardize the validity of this application or any patent resulting
therefrom.

02-12-2003
Date


GERARDO A. DELGADINO